Pearson Education, Inc. CME Project Algebra I, Algebra I

Degree of Evidence regarding the Standards for Mathematical Practice:

Moderate evidence

Summary of evidence:

- 1. Make sense of problems and persevere in solving them. Students are asked to explain as part of the problem in the practice exercises. There are some open-ended questions, and there are opportunities for students to make sense and meaning in real-world problems. Often one approach is given. There is some connection among tables, graphs, equations and situations. Overall students are asked to make sense of real-world problems.
- 2. **Reason abstractly and quantitatively**. Students are asked to take real-world situations and represent them in symbols in the problems and examples. Because of the frequency of real-world problems, units are important to the student's work. Though there are several application problems, many of them are not completely open-ended. There are opportunities for students to practice with mathematical symbols without context as well as in context.
- 3. Construct viable arguments and critique the reasoning of others. Some of the problems ask students to explain, and some questions ask students to communicate to correct the non-example. Some questions ask students to explain the theorem or rule in their own words. Occasionally students are asked to prove theorems. Students are required to explain their reasoning on some questions.
- 4. **Model with mathematics**. Mathematical ideas are related to models in life. There are many application problems where students are asked to find mathematical models. Students are required to create and use mathematical models.
- 5. **Use appropriate tools strategically.** There is limited evidence of this practice. Graphing calculators are part of problems and lessons, and there are some models of communication among students about calculators. Algebra software is not referenced; calculators are referenced, but other technology is not. Students get little to no experience comparing the effectiveness and usefulness of different models and technology.
- 6. **Attend to precision.** Symbols are introduced and explained. There is specific attention to equivalency. Conversation between students is modeled in the student resource, and students are given some opportunities to communicate about mathematics. Examples use proper notation and are precise.
- 7. **Look for and make use of structure**. There was limited evidence of this practice. There is some connection to prior learning in the teacher notes. A few patterns are generalized into theorems, but patterns are rarely used for students to generalize about mathematics.
- 8. Look for and express regularity in repeated reasoning. There is limited evidence of this practice. Students rarely use repetition to recognize patterns and make generalizations. No opportunity for students to use patterns to discover shortcuts for themselves was found in the chapters reviewed. Occasionally patterns are used to help students see and make generalizations.